KANSAS

WINTER WEATHER AWARENESS DAY

WEDNESDAY, NOVEMBER 19, 2003

Again this year, the **National Weather Service**, in cooperation with the Kansas Emergency Management Agency (KEM) and County Emergency Managers, will observe **Winter Weather Awareness Day on Wednesday, November 19**. The day is set aside annually to prepare for the cold and snowy season, and to review winter weather information and safety rules.

Winter weather situations are sometimes overlooked and catch people unprepared. In the last 10 years, **38 deaths and 98 injuries** have been caused by winter storms, most attributed to traffic accidents.

In late January 2002, one of the worst ice storms in Kansas history crippled eastern and southern parts of our state. Many trees, power lines and even some buildings snapped from the tremendous weight of ice. An estimated 300,000 customers lost power with electrical service not returning in some areas for weeks. Damage and other losses were put at around $130 million.

What winter weather **preparations are being made in your local area?** What are the appropriate steps to take that will ensure your winter weather safety?

Enclosed is a variety of winter weather related information from the National Weather Service, Topeka, that can be used in articles, newscasts, presentations and features. **We encourage you to copy and distribute the material, as necessary.** Additional and more in-depth information is also available on our NWS Topeka Internet home page at: **http://www.crh.noaa.gov/top**

Mike Akulow,
Warning Coordination Meteorologist
mike.akulow@noaa.gov
National Weather Service, Topeka

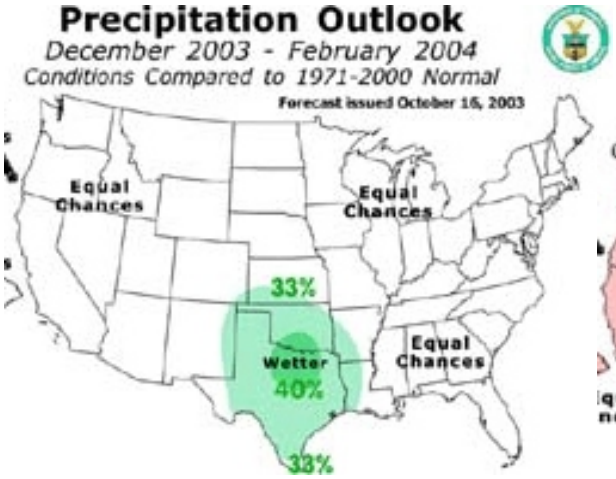
WHAT IS THE WINTER GOING TO BE LIKE??

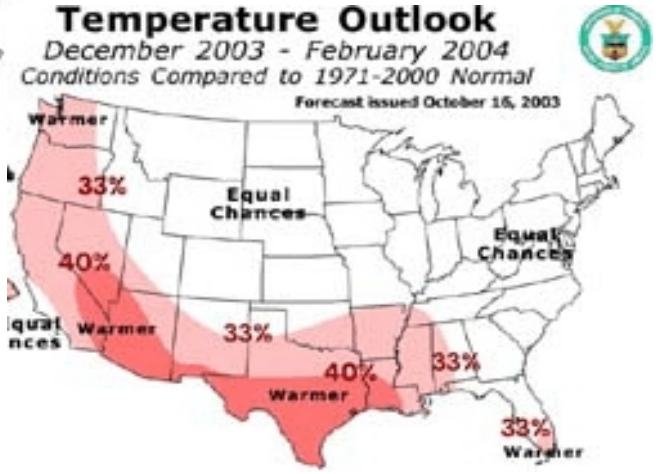
Always the question as we approach this time of the year, what is expected weatherwise for our area in the next 3-4 months. Long range forecasting is both tricky and contains much uncertainty. Overall, it is best **an average of wide variety of conditions** that will likely occur.

Unlike the last several years, this upcoming Kansas winter is not expected to be influenced by an El Niño, which is warming of the Pacific Ocean waters, nor a La Niña, which is abnormal cooling of the Pacific ocean. These two features affect the weather by shifting jet streams, storm tracks and moisture patterns which eventually influence weather in most areas around the world.

Although weak El Niño conditions may form early this winter, they would only have minimal if any impact. Therefore, winter over Kansas is expected to average **"near normal"** with typical variability and change. Long term drought conditions that have plagued much of the area during the summer may also persist, especially in the far northeast corner.

The maps below depict the current official outlook as developed by the National Weather Services's Climate Prediction Center (CPC) for the winter.





Winter Outlook map available at
http://www.noaanews.noaa.gov/stories2003/s2100.htm

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

WINTER WEATHER TERMINOLOGY

During the winter months **specific terminology** is used to communicate weather information. Knowledge of these National Weather Service terms is the first step in understanding and being prepared for winter weather. **These terms could save your life!**

Winter Weather Message: Segmented product issued every few hours giving details and explanations on winter weather warnings, watches, advisories, cancellations and safety information.

...WATCHES AND WARNINGS...

Winter Storm Watch: Severe winter weather is **possible** in the affected area. May include; snow storm, ice storm, blizzard, dangerous wind chills, or a combination of events. Issued 12 to 48 hours in advance.

Winter Storm Warning: Significant, possibly life-threatening, severe winter weather will occur, or is about to begin. For example: Snowfall of 6 inches in 12 hours and/or 8 inches in 24 hours, a mix of snow and freezing rain/sleet. Issued within 12 hours of conditions.

Blizzard Warning: Wind at least 35 mph with falling or blowing snow reducing visibility to under 1/4 mile for at least three hours.

High Wind Warning: Wind gusts above 57 mph or sustained winds at 40 mph or higher, for at least an hour.

Ice Storm Warning: Heavy ice accumulation will cause dangerous and damaging situations, such as downed utility lines and icy roads.

Wind Chill Warning: Wind Chill values colder than 25 below zero.

****

ADVISORIES

Winter Weather Advisory: Any combination of winter events that cause significant inconvenience, but probably **not** life-threatening when caution is exercised. For example; 1-5 inches of snow, light sleet or freezing drizzle, some blowing and/or drifting snow etc.

Snow Advisory: New snowfall of 1 to 5 inches is expected.

Wind Advisory: Sustained winds over 30 mph, and/or gusts under 57 mph.

Wind Chill Advisory: Wind chills of 15 below to 25 below zero.

Freezing Drizzle Advisory: Light ice coating on roads and highways, but no damage is expected to trees/power lines.

Blowing Snow Advisory: Wind-driven snow reducing visibility to 1/4 mile or less.

Dense Fog Advisory: Widespread fog with visibility under 1/4 mile.

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

NATIONAL WEATHER SERVICE

BE PREPARED...

Before the Storm Strikes

At home and at work...

Primary concerns are the potential loss of heat, power, telephone service, and a shortage of supplies if storm conditions continue for more than a day.

Have available:

- **Flashlight and extra batteries.**
- **Battery-powered NOAA Weather Radio and portable radio** to receive emergency information. *These may be your only links to the outside.*
- **Extra food and water.** High energy food, such as dried fruit or candy, and food requiring no cooking or refrigeration is best.
- **Extra medicine and baby items.**
- **First-aid supplies.**
- **Heating fuel.** Fuel carriers may not reach you for days after a severe winter storm.
- **Emergency heating source,** such as a fireplace, wood stove, space heater, etc.
  - Learn to use properly to prevent a fire.
  - Have proper ventilation.
- **Fire extinguisher and smoke detector.**
  - Test units regularly to ensure they are working properly.

On the farm...

- **Move animals to sheltered areas.** Shelter belts, properly laid out and oriented, are better protection for cattle than confining shelters, such as sheds.
- **Haul extra feed to nearby feeding areas.**
- **Have a water supply available.** Most animal deaths in winter storms are from dehydration.

In cars and trucks...

Plan your travel and check the latest weather reports to avoid the storm!

- **Fully check and winterize** your vehicle before the winter season begins.
- **Carry a WINTER STORM SURVIVAL KIT:**
  blankets/sleeping bags; flashlight with extra batteries; first-aid kit; knife; high-calorie, non-perishable food; extra clothing to keep dry; a large empty can and plastic cover with tissues and paper towels for sanitary purposes; a smaller can and water-proof matches to melt snow for drinking water; sack of sand (or cat litter); shovel; windshield scraper and brush; tool kit; tow rope; booster cables; water container; compass and road maps.
- **Keep your gas tank near full** to avoid ice in the tank and fuel lines.
- **Try not to travel alone.**
- **Let someone know** your timetable and primary and alternate routes.

DRESS TO FIT THE SEASON. Wear loose-fitting, light-weight, warm clothing in several layers. Trapped air insulates. Layers can be removed to avoid perspiration and subsequent chill. Outer garments should be tightly woven, water repellent, and hooded. Wear a hat. Half your body heat loss can be from the head. Cover your mouth to protect your lungs from extreme cold. Mittens, snug at the wrist, are better than gloves. Try to stay dry.

Example of winter storm survival kit.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1996 — 413-873

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

WINTER DRIVING

One of the leading causes of death and injuries during winter storms is **traffic accidents.** Driving in winter weather takes extra skill, time and caution. Vehicle and road capabilities are greatly reduced and call for constant driving awareness and attention. Here are some winter driving recommendations from **The American Red Cross** which could save your life.

✓**Have your car(s) winterized before the winter storm season.**

Keeping your car(s) in good condition will decrease your chance of being stranded in cold weather. Check, and repair as necessary, your battery, antifreeze, wipers and windshield washer fluid, lights, heater, defroster, and tires.

✓**If you have a cell phone or two-way radio available for your use, keep the battery charged and keep it with you whenever traveling in winter weather.**

✓**Keep a windshield scraper and small broom in your car for ice and snow removal.**

✓**Put together a disaster supplies kit for the trunk of each car used by members of your household.**

The kit at a minimum should include blankets, extra clothing, non-perishable food and water, flashlight, first aid kit and a bright piece of cloth for outside notification and identification. Keep your car's gas tank full for emergency use and to keep the fuel line from freezing.

✓**Plan long trips carefully.**

Listen to weather radio, local radio/TV or call the state transportation department for the latest road conditions. Plan to travel during daylight and, if possible, take at least one other person. Let someone know your destination, your route, and when you expect to arrive. Be aware of sleet, freezing rain, freezing drizzle, and dense fog, which can make driving very hazardous.

Road Condition information can be obtained at the following:

Kansas: 800-585-ROAD(7623)

KS Turnpike: 785-266-4135

KDOT Internet: www.kanroad.org

Iowa: 800-288-1047
Missouri: 800-222-6400
Nebraska: 402-471-4533
Colorado: 877-315-7623

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

WINTER PRECIPITATION

A wide variety of precipitation from snow and rain, to sleet and freezing rain occur in the winter months. Temperatures at the ground and up to about 5 thousand feet up in the atmosphere determine precipitation type. Sharply varying temperatures over just a few miles, both aloft and near the ground, can produce quick changes in the type and amount of precipitation.

In the diagram below, **snow is produced** when temperatures are uniformly cold both aloft and at the ground. The snow does not melt as it falls, and temperatures at or below 32 degrees near the ground allow it to accumulate.

However, **sleet is formed** when temperatures at or slightly above freezing aloft produce rain that freezes to ice pellets, as it falls into a cold layer of air. Sleet usually bounces when hitting a surface and does not stick to objects. However, it can produce a "sandlike" accumulation like snow.

Freezing rain forms when warm temperatures aloft, generally several degrees above freezing, produces rain that falls onto a surface with temperatures below 32 degrees. This causes the liquid rain to freeze on impact to objects such as trees, power lines, cars and roads forming a coating or glaze of ice. Even a small amount of freezing rain on roads can create a significant travel hazard.

KANSAS WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

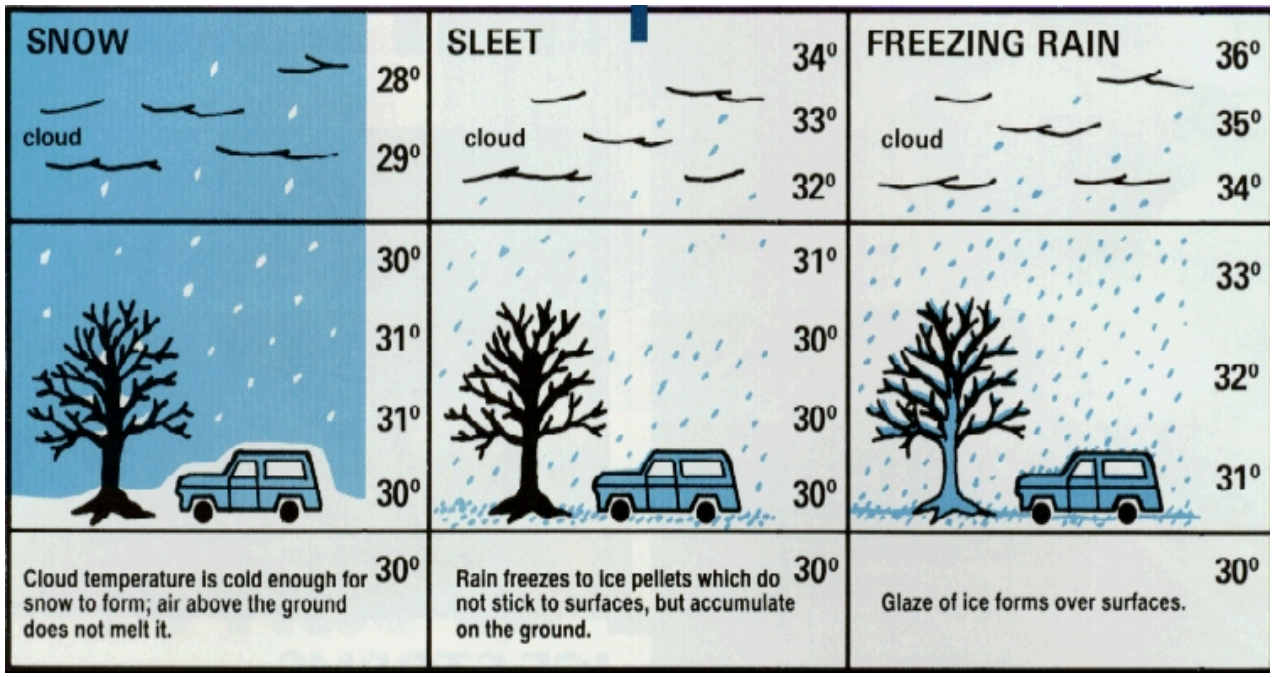
ALL ABOUT SNOW...

Data obtained at National Weather Service observing stations in Concordia and Topeka. Information likely to vary at other unofficial sites around north central and northeast Kansas.

....The Five Snowiest Winters...

	Concordia	Topeka
1.	59.1" ... 1959-60	47.9" - 1911-12
2.	54.0" ... 1943-44	44.4" - 1959-60
3.	45.2" ... 1957-58	43.2" - 1992-93
4.	44.0" ... 1970-71	42.9" - 1978-79
5.	41.9" ... 1947-48	42.5" - 1914-15

Average Winter Snowfall:	22.2"	20.7"
2002-2003 Winter Snowfall:	15.0"	12.7"



Lowest Winter Snowfall:	2.5"/ 1903/04	3.6"/ 1916-17
Normal Snowiest Month:	February - 5.5"	January - 5.9"
Greatest Monthly Amount: (since 1950)	22.7" - Mar. 1960	23.0" - Jan. 1993

Greatest 24 hour Snowfall: 17.2" - Mar. 16-17, 1924 18.7" - Feb 27-28, 1900

Earliest Measurable Snowfall: 2.5" - Oct. 7, 1992 0.8" - Oct 9,1970

Latest Measurable Snowfall: 7.8" - 4/11/97 3.2"- 5/3/07

Average Number of days with
an inch or more of snow: 7.4 6.8

Latest First Measurable Snowfall in season:
(Same date) February 10, 1923

.....

Snowfall Trivia:

Greatest yearly snowfall in Kansas: **99 inches** at St France, 1984
Greatest 24 hour snowfall: **24 inches** Norcatur, Oct. 26, 1997
Greatest number of days with snow on the ground: **152**, Hays, 1992-93

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003

MORE WINTER STATS.....

HOW COLD WAS IT?? Brrrr!

....TEMPERATURE DATA.....

The Five Coldest Winters (*Dec-Feb*)

Concordia	Topeka
1...1978/79...19.9°F	1...1978/79...20.7°F
2...1977/78...21.4°	2...1977/78...22.6°
3...1904/05...22.2°	3...1983/84...26.8°
4...1935/36...23.6°	4...1984/85...27.4°
5...1886/87...23.7°	5...1992/93...29.6°

Average Winter Temperature: 29.7°F 30.7°F
(***Dec-Feb***)

Warmest Winter Season:(Avg Temp) 38.2°F 38.7°F
(1991-92)

2002/03 Average Winter Temp: 31.5°F 32.0°F

Lowest Temperature last Winter: -6°F (01/23/03) -5°F (01/23/03)

Record Lowest Temperature: -26°/Dec 22, 1989 -26°/Dec 23, 1989

Average number of Days with low temperature at or **below 32°F:** (per year) 125 113

Average number of Days with low temperature at or **Below ZERO** °F: (per year) 9 4

Normal Daily High and Low:

	Concordia			Topeka		
	DEC	JAN	FEB	DEC	JAN	FEB
High:	39.6	36.3	42.9	40.9	37.2	43.8
Low:	20.8	16.9	21.9	21.8	17.2	23.0

.....

Temp Trivia: On December 22, 1989, the mercury dipped to **32 below zero** at **both** Brewster and Colby in northwest Kansas. The coldest temperature ever recorded in Kansas was **40 below zero** at Labanon on Feb. 13, 1905.

WINTER WEATHER AWARENESS DAY, NOVEMBER 19, 2003